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G.H. Cunningham's use of te reo Māori in fungal epithets

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Abstract—New Zealand mycologist G.H. Cunningham (1892–1962) frequently used the indigenous language of New Zealand, te reo Māori, when creating epithets for new species and replacement names. All of these epithets are listed, and nomenclatural treatments (including etymologies) of the taxa are presented. In addition, tables cite all te reo Māori and te reo-derived generic names and epithets published by mycological authors. Guidelines are discussed for the appropriate orthography for names and epithets derived from te reo Māori and other non-latinate vernacular languages.

Key words—ta re Moriori, undeclinable epithets, nouns in apposition, diacritical marks, host species

Introduction

Gordon Herriot Cunningham (1892–1962), who was New Zealand's first resident professional mycologist (McKenzie 2004; https://teara.govt.nz/en/biographies/4c47/cunningham-gordon-herriot), is regarded as the "Father of New Zealand Plant Pathology and Mycology." After about 17 years of employment in the Department of Agriculture, during which he gained B.Sc., M.Sc., and Ph.D. degrees, Cunningham served the Department of Scientific and Industrial Research [DSIR] as Director of the Plant Diseases Division [PDD] from its foundation in 1936 until his death; his numerous dried specimens formed the foundation of the current New Zealand Fungarium (PDD). His initial focus was mainly on plant pathology, but taxonomic mycology soon became a passion, and he published numerous papers and monographic books on rust fungi, gasteromycetes, polypores, and thelephoraceous fungi.

A feature of Cunningham's new taxa was his frequent use of fungal epithets drawn from te reo Māori [the indigenous language of Aotearoa/New Zealand] (Pennycook & McKenzie 2002). A survey across all biological disciplines (Veale & al. 2019) identified Cunningham as the fourth most prolific proponent of this practice (after an arachnologist and two malacologists) but did not discuss his contribution. A search of Cunningham's taxonomic publications has identified 56 species (proposed as either sp. nov. or nom. nov.) with 49 epithets either drawn directly, or derived, from te reo Māori. These are presented here, with nomenclatural, taxonomic, and etymological details. In addition, tables are presented of te reo Māori and te reo-derived genus names and species/subspecies/variety epithets published by all mycological authors. Guidelines are discussed for the appropriate orthography for names and epithets derived from te reo Māori and other non-latinate vernacular languages.

Materials & methods

All of Cunningham's taxonomic publications were searched; 22 of them proposed names with te reo Māori or te reo-derived epithets (Cunningham 1923, 1924a,b, 1928, 1930, 1931, 1938, 1944, 1945a,b, 1947, 1948a,b,c, 1949, 1953a,b, 1954, 1955, 1956, 1963, 1965).

For a comprehensive overview of te reo Māori or te reo-derived fungal names (genera, species, subspecies, and varieties), a careful search was made of comprehensive modern listings of New Zealand fungi (Buchanan & Ryvarden 2000; Gadgil & al. 2005; Galloway 2007; Gordon 2012; Horak 2008, 2018; Pennycook 1989, 2004; Pennycook & Galloway 2004; Petersen 1988; Stephenson 2003; Vánky & McKenzie 2002), and these were cross-checked and augmented by searches of the major mycological nomenclature websites (Index Fungorum 2020, MycoBank 2020, Ngā Harore 2020). Epithets derived from other Polynesian languages (e.g., Hawaiʻian, Tahitian) and epithets with a misleading similarity to te reo Māori (e.g., *wainioi* referring to the Finnish lichenologist Vainio/Wainio; *waikerieanum* from the Australian locality Waikerie) were deleted from the search results.

Cunningham's epithets

The 49 te reo Māori or te reo-derived fungal epithets proposed by Cunningham are listed alphabetically. Presented beneath each epithet are the new species or replacement names in which the epithet was first published, together with all subsequent homotypic synonyms in which the epithet was recombined. The currently accepted name for each species is indicated with bold font. The etymology of each epithet is explained, together with the type host and the type locality when these are relevant to the etymology; in addition, the host species of the type specimen is listed for all rust species, even if not involved in the etymology. Māori names of host plants were sourced from Williams (1971) and Beever (1991). Localities are referred to the "Crosby districts" defined by Crosby & al. (1998). Host nomenclature and synonymy follows Ngā Tipu (2020).

akiraho

Puccinia akiraho G. Cunn., Trans. & Proc. New Zealand Inst. 61: 411. 1930.

≡ *Puccinia novae-zelandiae* G. Cunn., Trans. & Proc. New Zealand Inst. 54: 686. 1923. [non *P. novozelandica* Bubak 1901].

Type host: *Olearia forsteri* (*Compositae*) [= *Olearia paniculata* (J.R. Forst. & G. Forst.) Druce].

Etymology: **akiraho**, Māori name for *Olearia paniculata.*

aorangi

Puccinia aorangi G. Cunn., Trans. & Proc. New Zealand Inst. 61: 411. 1930.

Type locality & host: 1600–2000 m altitude on Taranaki/Mt Egmont, North Island; *Celmisia major* Cheeseman (*Compositae*) [= *Celmisia major* var. *brevis* Allan, the variety endemic to Taranaki/Mt Egmont].

Etymology: **aorangi/aoraki** ["cloud-piercer"], Māori name (and common name) for Mt Cook, South Island; perhaps used in a general sense, referring to the type locality on a North Island cloud-piercer.

= ***Puccinia egmontensis*** G. Cunn., Trans. & Proc. New Zealand Inst. 54: 681. 1923.

aotearoa

Lachnella aotearoa G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 145: 331. 1963.

≡ ***Flagelloscypha aotearoa*** (G. Cunn.) Agerer, Mitt. Bot. Staatssamml. München 19: 252. 1983

Etymology: **aotearoa**, Māori name (and common name) for New Zealand.

Stereum aotearoa G. Cunn., Trans. Roy. Soc. New Zealand 84(2): 212. 1956.

Etymology: **aotearoa**, Māori name (and common name) for New Zealand.

aroha

Poria aroha G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 72: 39. 1947.

≡ *Flaviporus aroha* (G. Cunn.) G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 164: 150. 1965.

Etymology: **aroha**, Māori, referring to the type locality, Mt Te Aroha, Bay of Plenty.

= ***Australoporus tasmanicus*** (Berk.) P.K. Buchanan & Ryvarden, Mycotaxon 31: 5. 1988.

awhitu

Fomes awhitu G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 79: 16. 1948.

Etymology: **āwhitu**, Māori, referring to the type locality, Awhitu Peninsula, Auckland.

= ***Abundisporus roseoalbus*** (Jungh.) Ryvarden, Belg. J. Bot. 131: 154. 1999.

haumata

Uredo haumata G. Cunn., Trans. & Proc. New Zealand Inst. 59: 499. 1928.

Correct name will combine this epithet in *Uromyces* (E.H.C. McKenzie, in prep.).

TYPE HOST: *Danthonia cunninghamii* (*Gramineae*) [≡ *Chionochloa conspicua* subsp. *cunninghamii* (Hook.f.) Zotov].

ETYMOLOGY: **haumata**, Māori name for broad-leaved snowgrass, *Chionochloa* spp.

= *Uromyces macnabbii* Cummins, Rust Fungi Cereals, Grasses and Bamboos: 483. 1971.

hautu

"*Hysterangium hautu*" G. Cunn., Trans. & Proc. Roy. Soc. New Zealand 67: 409. 1938, nom. inval. [no Latin description].

≡ ***Protubera hautuensis*** Castellano & Beever, New Zealand J. Bot. 32: 322. 1994.

ETYMOLOGY: **hautū**, Māori name for the type locality, Waimarino, Taupo.

heketara

Puccinia heketara G. Cunn., Trans. & Proc. New Zealand Inst. 55: 393. 1924.

TYPE HOST: *Olearia cunninghamii* (*Compositae*) [= *Olearia rani* (A. Cunn.) Druce].

ETYMOLOGY: **heketara**, Māori name for *Olearia rani.*

= ***Puccinia atkinsonii*** G. Cunn., Trans. & Proc. New Zealand Inst. 54: 675. 1923.

hoheriae

Puccinia hoheriae G. Cunn., Trans. & Proc. New Zealand Inst. 54: 661. 1923, nom. illeg. [non Wakefield 1917].

TYPE HOST: *Hoheria populnea* A. Cunn. (*Malvaceae*).

ETYMOLOGY: genitive case of generic name (and common name) *Hoheria*, derived from **hōhere**, Māori name for *Hoheria* spp.

= *Puccinia hoheriae* Wakef., Bull. Misc. Inform. Kew. 1917: 312. 1917.

= ***Puccinia plagianthi*** McAlpine, Proc. Roy. Soc. Victoria 7: 218. 1895.

horopito

Uredo horopito G. Cunn., Trans. & Proc. Roy. Soc. New Zealand 75: 326. 1945.

TYPE HOST: *Pseudowintera axillaris* (J.R. Forst. & G. Forst.) Dandy (*Winteraceae*).

ETYMOLOGY: **horopito**, Māori name (and common name) for *Pseudowintera* spp.

huia

Solenia huia G. Cunn., Trans. Roy. Soc. New Zealand 81(2): 179. 1953.

≡ *Porotheleum huia* (G. Cunn.) W.B. Cooke, Mycologia 49: 691. 1957.

≡ *Stigmatolemma huia* (G. Cunn.) W.B. Cooke, Beih. Sydowia 4: 128. 1961.

≡ *Stromatoscypha huia* (G. Cunn.) G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 145: 305. 1963.

≡ ***Resupinatus huia*** (G. Cunn.) Thorn & al., Mycologia 97: 1148. 2006.

ETYMOLOGY: **huia**, Māori, referring to the type locality, Huia, Auckland.

hunua

Poria hunua G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 72: 39. 1947.

≡ ***Antrodiella hunua*** (G. Cunn.) Ryvarden, Prelim. Polyp. Fl. E. Africa: 257. 1980.

≡ *Flaviporus hunua* [as "*hunuus*"] (G. Cunn.) Ginns, Mycotaxon 21: 326. 1984.

Etymology: **hūnua**, Māori, referring to the type locality, Hunua Range, Auckland.

hupiro

Aecidium hupiro G. Cunn., Trans. & Proc. New Zealand Inst. 55: 36. 1924.

Type host: *Coprosma foetidissima* J.R. Forst. & G. Forst. (*Rubiaceae*).

Etymology: **hūpiro**, Māori name for *Coprosma foetidissima.*

kaiku

Caeoma kaiku G. Cunn., Trans. & Proc. New Zealand Inst. 61: 416. 1930.

Type host: *Parsonsia capsularis* (G. Forst.) DC. × *heterophylla* A. Cunn. (*Apocynaceae*).

Etymology: **kaikū**, Māori name for *Parsonsia* spp.

kamahi

Fuscoporia kamahi G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 164: 263. 1965.

≡ ***Phellinus kamahi*** (G. Cunn.) P.K. Buchanan & Ryvarden, Mycotaxon 31: 15. 1988.

Type host: *Weinmannia racemosa* L.f. (*Cunoniaceae*).

Etymology: **kāmahi**, Māori name (and common name) for *Weinmannia racemosa.*

karetu

Uredo karetu G. Cunn., Trans. & Proc. New Zealand Inst. 55: 41. 1924.

Type host: *Hierochloe redolens* (Vahl) Roem. & Schult. (*Gramineae*).

Etymology: **kāretu**, Māori name (and common name) for *Hierochloe redolens.*

kauri

Corticium kauri G. Cunn., Trans. Roy. Soc. New Zealand 82: 303. 1954.

Type substrate: much decayed wood of *Agathis australis* (D. Don) Lindl. ex Loudon (*Araucariaceae*).

Etymology: **kauri**, Māori name (and common name) for *Agathis australis.*

keae

Puccinia keae G. Cunn., Trans. & Proc. New Zealand Inst. 59: 493. 1928.

Type host: *Olearia nummulariifolia* (Hook.f.) Hook.f. (*Compositae*).

Etymology: **kea**, Māori name (and common name) for *Nestor notabilis* [mountain parrot]; referring to the type locality, Kea Point, Mackenzie.

koherika

Puccinia koherika G. Cunn., Trans. & Proc. New Zealand Inst. 61: 408. 1930.

Type host: *Angelica rosifolia* Hook. (*Umbelliferae*) [≡ *Scandia rosifolia* (Hook.) J.W. Dawson].

Etymology: **koheriki**, Māori name for *Scandia rosifolia.*

konini

Uredo konini G. Cunn., Trans. & Proc. New Zealand Inst. 59: 502. 1928, nom. illeg. [a superfluous nom. nov., proposed to avoid creating a comb. nov. that would be an illegitimate later homonym of *Uredo fuchsiae* Arthur & Holway1918; however, Cunningham was apparently unaware that the combination had already been published legitimately in 1903].

≡ *Coleosporium fuchsiae* Cooke, Grevillea 14: 129. 1886

≡ *Uredo fuchsiae* (Cooke) Henn., Beibl. Hedwigia 42: (73). 1903.

Type host: *Fuchsia excorticata* (Vahl) Roem. & Schult. (*Onagraceae*).

Etymology: **kōnini**, Māori name for fruit of *Fuchsia excorticata.*

= ***Mikronegria fuchsiae*** P.E. Crane & R.S. Petersen, New Zealand J. Bot. 45: 709. 2007.

kopoti

Puccinia kopoti G. Cunn., Trans. & Proc. New Zealand Inst. 54: 668. 1923.

Type host: *Anisotome aromatica* Hook.f. (*Umbelliferae*).

Etymology: **kopoti**, Māori name for *Anisotome aromatica.*

kowhai

Aecidium kowhai G. Cunn., Trans. & Proc. New Zealand Inst. 55: 35. 1924.

Type host: *Edwardsia tetraptera* (*Leguminosae*) [≡ *Sophora tetraptera* J.F. Mill.].

Etymology: **kōwhai**, Māori name (and common name) for *Sophora* spp.

= ***Uromyces edwardsiae*** G. Cunn., Trans. & Proc. New Zealand Inst. 55: 392. 1924.

maire

Laricifomes maire G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 164: 262. 1965.

≡ ***Fomitopsis maire*** (G. Cunn.) P.K. Buchanan & Ryvarden, Mycotaxon 31: 15. 1988.

Type host: *Gymnelaea cunninghamii* (*Oleaceae*) [≡ *Nestegis cunninghamii* (Hook.f.) L.A.S. Johnson].

Etymology: **maire**, Māori name (and common name) for *Nestegis* spp.

mania

Puccinia mania G. Cunn., Trans. & Proc. New Zealand Inst. 61: 404. 1930.

Type host: *Carex wakatipu* Petrie (*Cyperaceae*).

Etymology: **mānia**, Māori name for some *Carex* spp.

manuka

Poria manuka G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 72: 38. 1947.

≡ *Oligoporus manuka* (G. Cunn.) P.K. Buchanan & Ryvarden, Mycotaxon 31: 17. 1988.

≡ ***Postia manuka*** (G. Cunn.) P.K. Buchanan & Ryvarden, New Zealand J. Bot. 38(2): 303. 2000.

Type host: *Leptospermum scoparium* J.R. Forst. & G. Forst. (*Myrtaceae*).

Etymology: **mānuka**, Māori name (and common name) for *Leptospermum scoparium*.

maurea

Puccinia maurea G. Cunn., Trans. & Proc. New Zealand Inst. 61: 406. 1930.

Type host: *Carex inversa* R. Br. (*Cyperaceae*).

Etymology: **maurea**, Māori name for some *Carex* spp.

namua

Puccinia namua G. Cunn., Trans. & Proc. New Zealand Inst. 55: 3. 1924.

Type host: *Anisotome filifolia* (Hook.f.) Cockayne & Laing (*Umbelliferae*).

Etymology: ***namua***, derivation unknown. (Similar te reo Māori words are *namu* for sandfly [blackfly] or mosquito; and *namunamu* for indigenous *Geranium* spp. and the exotic weed *Geranium molle* (*Geraniaceae*). The Māori name for *Anisotome aromatica* is **kopoti**.)

nikau

Epithele nikau G. Cunn., Trans. Roy. Soc. New Zealand 83: 629. 1956.

≡ ***Skeletohydnum nikau*** (G. Cunn.) Jülich, Persoonia 10: 331. 1979.

Type host: *Rhopalostylis sapida* H. Wendl. & Drude (*Palmae*).

Etymology: **nīkau**, Māori name (and common name) for *Rhopalostylis sapida*.

Lachnella nikau G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 145: 331. 1963.

Type host: *Rhopalostylis sapida* H. Wendl. & Drude (*Palmae*).

Etymology: **nīkau**, Māori name (and common name) for *Rhopalostylis sapida*.

Peniophora nikau G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 145: 127. 1963.

≡ *Peniophora sororia* G. Cunn., Trans Roy. Soc. New Zealand 83(2): 280. 1955, nom. illeg. [non Bourdot & Galzin 1913].

≡ ***Subulicystidium nikau*** (G. Cunn.) Jülich, Ber. Deutsch. Bot. Ges. 81(9): 419. 1969 ["1968"].

Type host: *Rhopalostylis sapida* H. Wendl. & Drude (*Palmae*).

Etymology: **nīkau**, Māori name (and common name) for *Rhopalostylis sapida*.

otagensis/–ense

Corticium otagense G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 145: 331. 1963.

Etymology: referring to the European name Otago (historically the southernmost province of New Zealand), derived from **ōtākou**, a Kāi Tahu [southern Māori] locality name [see also the **otakou** epithet entry, below]; the guttural Kāi Tahu pronunciation of 'k' was misheard as a 'g' by early settlers.

Pellicularia otagensis G. Cunn., Trans. Roy. Soc. New Zealand 81: 324. 1953.

≡ ***Sistotrema otagense*** (G. Cunn.) Stalpers & P.K. Buchanan, New Zealand J. Bot. 29: 331. 1991.

Etymology: referring to the European name Otago (historically the southernmost province of New Zealand), derived from **ōtākou**, a Kāi Tahu [southern Māori] locality name [see also the **otakou** epithet entry, below]; the guttural Kāi Tahu pronunciation of 'k' was misheard as a 'g' by early settlers.

otakou

Poria otakou G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 72: 38. 1947.

≡ ***Ceriporia otakou*** (G. Cunn.) P.K. Buchanan & Ryvarden, Mycotaxon 31: 22. 1988.

≡ *Gloeoporus otakou* (G. Cunn.) Zmitr. & Spirin, Mycena 6: 35. 2006.

Etymology: **ōtākou**, Māori name of the Kāi Tahu kaika [village] near Taiaroa Head, Otago Peninsula, where in 1848 Scottish settlers made their first contact with tangata whenua [the people of the land]; referring to the type locality, Kinloch, Otago Lakes.

Uromyces otakou G. Cunn., Trans. & Proc. New Zealand Inst. 54: 627. 1923.

Type host: *Poa caespitosa* Spreng. (*Gramineae*) [= *Poa cita* Edgar].

Etymology: **ōtākou**, Māori name of the Kāi Tahu kaika [village] near Taiaroa Head, Otago Peninsula, where in 1848 Scottish settlers made their first contact with tangata whenua [the people of the land]; referring to the type locality, Routeburn Valley, Otago Lakes.

otira

Aecidium otira G. Cunn., Trans. & Proc. New Zealand Inst. 59: 498. 1928.

Correct name will combine this epithet in *Puccinia* (E.H.C. McKenzie, in prep.).

Type host: *Olearia arborescens* (G. Forst.) Cockayne & Laing (*Compositae*).

Etymology: **ōtira**, Māori name for the Otira river flowing westward from the vicinity of the type locality, Arthurs Pass, North Canterbury.

pirongia

Poria pirongia G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 72: 39. 1947.

≡ ***Haploporus pirongia*** (G. Cunn.) Meng Zhou & al., MycoKeys 54: 92. 2019.

Etymology: **p irongia**, Māori, referring to the type locality, Mt Pirongia, Waikato.

pounamu

Puccinia pounamu G. Cunn., Trans. & Proc. New Zealand Inst. 54: 688. 1923.

Type host: *Senecio southlandicus* (*Compositae*) [= *Brachyglottis lagopus* (Raoul) B. Nord.].

Etymology: **pounamou**, Māori word for greenstone [nephrite jade]; referring to the type locality Greenstone Valley, Otago Lakes.

rata

Poria rata G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 72: 40. 1947.

≡ ***Antrodiella rata*** (G. Cunn.) P.K. Buchanan & Ryvarden, Mycotaxon 31: 25. 1988.

Type host: *Metrosideros robusta* A. Cunn. (*Myrtaceae*).

Etymology: **rātā**, Māori name (and common name) for some *Metrosideros* spp.

rautahi

Puccinia rautahi G. Cunn., Trans. & Proc. New Zealand Inst. 61: 405. 1930.

Type host: *Carex gaudichaudiana* Kunth (*Cyperaceae*).

Etymology: **rautahi**, Māori name for some *Carex* spp.

tararua

Puccinia tararua G. Cunn., Trans. & Proc. New Zealand Inst. 54: 671. 1923.

Type host: *Gentiana patula* (*Gentianaceae*) [≡ *Gentianella patula* (Kirk) Holub].

Etymology: **tararua**, Māori; referring to the type locality, Tararua Ranges, Wellington.

tawa

Trametes tawa G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 80: 9. 1948.

≡ *Metuloidea tawa* (G. Cunn.) G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 164: 250. 1965.

Frequent substrate: bark of dead upright branches of *Beilschmiedia tawa* (A. Cunn.) Benth. & Hook.f. ex Kirk (*Lauraceae*).

Etymology: **tawa**, Māori name (and common name) for *Beilschmiedia tawa.*

= ***Metuloidea rhinocephala*** (Berk.) Miettinen, Ann. Bot. Fenn. 53(3-4): 165. 2016.

tawhai

Fuscoporia tawhai G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 73: 8. 1948.

≡ ***Phellinus tawhai*** (G. Cunn.) G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 164: 229. 1965.

Type host: *Nothofagus cliffortioides* (*Nothofagaceae*) [≡ *Fuscospora cliffortioides* (Hook.f.) Heenan & Smissen].

Etymology: **tāwhai/tāwai**, Māori name for *Nothofagus* [= *Fuscospora* and *Lophozonia*] spp.

tiritea

Puccinia tiritea G. Cunn., Trans. & Proc. New Zealand Inst. 54: 654. 1923.

Type host: *Muehlenbeckia australis* (G. Forst.) Meisn. (*Polygonaceae*).

Etymology: **turitea/tiritea**, Māori; referring to the type locality, Turitea, Wellington.

= ***Puccinia otagensis*** (Linds.) McKenzie & Padamsee, Pl. Pathol. 66: 1252. 2017.

toa

Puccinia toa G. Cunn., Trans. & Proc. New Zealand Inst. 61: 408. 1930.

≡ *Puccinia haloragis* [as "*halorrhagidis*"] G. Cunn., Trans. & Proc. New Zealand Inst. 54: 664. 1923, nom. illeg. [non Sydow & Sydow 1913].

Type host: *Haloragis* [as "*Halorrhagis*"] *depressa* (*Haloragaceae*) [= *Gonocarpus aggregatus* (Buchanan) Orchard].

Etymology: **toa/toatoa**, Māori name for some *Haloragis* spp.

toatoa

Tyromyces toatoa G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 164: 262. 1965.

Type host: *Phyllocladus alpinus* Hook.f. (*Podocarpaceae*).

Etymology: **toatoa**, Māori name for *Phyllocladus* spp.

toetoe

Uredo toetoe G. Cunn., Trans. & Proc. New Zealand Inst. 55: 41. 1924.

Type host: *Arundo conspicua* (*Gramineae*) [≡ *Chionochloa conspicua* (G. Forst.) Zotov].

Etymology: **toetoe**, Māori name (and common name) for *Chionochloa conspicua.*

tongariro

Cyphella tongariro G. Cunn., Trans. Roy. Soc. New Zealand 81: 185. 1953.

≡ *Lachnella tongariro* (G. Cunn.) W.B. Cooke, Beih. Sydowia 4: 80. 1961.

≡ ***Flagelloscypha tongariro*** (G. Cunn.) Agerer, Sydowia 32: 9. 1980 ["1979"].

Etymology: **tongariro**, Māori; referring to the type locality, Mt Tongariro, Taupo.

totara

Cyphella totara G. Cunn., Trans. Roy. Soc. New Zealand 81: 182. 1953.

≡ ***Calyptella totara*** (G. Cunn.) W.B. Cooke, Beih. Sydowia 4: 43. 1961.

≡ *Lachnella totara* (G. Cunn.) G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 145: 318. 1963.

Type host: *Podocarpus totara* D. Don (*Podocarpaceae*).

Etymology: **tōtara**, Māori name (and common name) for *Podocarpus totara* and *P. laetus.*

Peniophora totara G. Cunn., Trans. Roy. Soc. New Zealand 83: 271. 1955.

≡ ***Phlebia totara*** (G. Cunn.) Stalpers & P.K. Buchanan, New Zealand J. Bot.29: 338. 1991.

Type host: *Podocarpus hallii* (*Podocarpaceae*) [= *Podocarpus laetus* Hooibr. ex Endl.].

Etymology: **tōtara**, Māori name (and common name) for *Podocarpus laetus* and *P. totara.*

Poria totara G. Cunn., New Zealand Dept. Sci. Industr. Res., Bull. 164: 261. 1965.

≡ ***Ceriporia totara*** (G. Cunn.) P.K. Buchanan & Ryvarden, Mycotaxon 31: 33. 1988.

≡ *Gloeoporus totara* [as "*totarus*"] (G. Cunn.) Zmitr. & Spirin, Mycena 6: 36. 2006.

Type host: *Podocarpus totara* D. Don (*Podocarpaceae*).

Etymology: **tōtara**, Māori name (and common name) for *Podocarpus totara* and *P. laetus.*

tupare

Uredo tupare G. Cunn., Trans. & Proc. New Zealand Inst. 55: 44. 1924.

Type host: *Olearia colensoi* Hook.f. (*Oleaceae*).

Etymology: **tūpare**, Māori name for *Olearia colensoi.*

waiouru

Cintractia waiouru G. Cunn., Trans. & Proc. Roy. Soc. New Zealand 75: 335. 1945.

Type host: *Carpha alpina* R. Br. (*Cyperaceae*).

Etymology: **waiouru**, Māori; referring to the area south of the type locality, Waihohonu Stream, National Park, Taupo.

= ***Anthracoidea carphae*** (Speg.) Vánky, Bot. Not. 132: 230. 1979.

weraroensis

Poria weraroensis G. Cunn., New Zealand Dept. Sci. Industr. Res., Pl. Dis. Div., Bull. 72: 40. 1947, nom. dub.

[a name of uncertain application; Buchanan & Ryvarden 2000: 301].

Etymology: **weraroa**, Māori; referring to the type locality, Weraroa, Wellington.

whakatipu

Puccinia whakatipu G. Cunn., Trans. & Proc. New Zealand Inst. 55: 4. 1924.

Type host: *Anisotome filifolia* (Hook.f.) Cockayne & Laing (*Umbelliferae*).

Etymology: **whakatipu/wakatipu**, Māori; referring to the type locality, Lake Wakatipu, Otago Lakes.

wharanui

Uredo wharanui G. Cunn., Trans. & Proc. New Zealand Inst. 55: 46. 1924.

Type Host: *Olearia insignis* (*Compositae*) [≡ *Pachystegia insignis* (Hook.f.) Cheeseman].

Etymology: **wharanui**, Māori; referring to the type locality, Wharanui, Kaikoura.

Table 1. Fungal generic names based on te reo Māori.
Classification is to family and order; '[L]'= lichenised taxon.

Name	Taxon	Classification
Aotearoamyces	*Aotearoamyces* P.R. Johnst. & al. 2018	*Tympanidaceae, Helotiales*
Harorepupu	*Harorepupu* P.R. Johnst. & al. 2015	Inc. sed., *Onygenales*
Podotara	*Podotara* Malcolm & Vězda 1996	*Pilocarpaceae, Lecanorales* [L]
Pureke	*Pureke* P.R. Johnst. 1991	*Rhytismataceae, Rhytismatales*
Weraroa	*Weraroa* Singer 1958	*Hymenogastraceae, Agaricales*

Table 2. Fungal species and variety epithets based on te reo Māori and ta re Moriori; only new and replacement names are listed.
Classification is to subphylum; [L] = lichenised taxon; [Lc] = lichenicolous taxon.

Epithet	Taxon	Classification
akatorensis	*Buellia akatorensis* Elix & A. Knight 2017	*Pezizomycotina* [L]
akiraho	*Puccinia akiraho* G. Cunn. 1930	*Pucciniomycotina*
anauensis	*Cortinarius anauensis* Soop 2001	*Agaricomycotina*
aorangi	*Puccinia aorangi* G. Cunn. 1930	*Agaricomycotina*
	Stephanospora aorangi Beever & al. 2015	*Pucciniomycotina*
aotearoa	*Armillaria aotearoa* L.A. Hood & Ramsfield 2016	*Agaricomycotina*
	Chalara aotearoa Nag Raj & S. Hughes 1974	*Pezizomycotina*
	Colletotrichum aotearoa B.S. Weir & P.R. Johnst. 2012	*Pezizomycotina*
	Harorepupu aotearoa P.R. Johnst. & al. 2015	*Pezizomycotina*
	Lachnella aotearoa G. Cunn. 1963	*Agaricomycotina*
	Neopestalotiopsis aotearoa Maharachch. & al. 2014	*Pezizomycotina*
	Phyllisciella aotearoa Henssen & J.K. Bartlett 1984	*Pezizomycotina* [L]
	Stereum aotearoa G. Cunn. 1956	*Agaricomycotina*
aotearoae	*Chaetosphaeria aotearoae* S. Hughes 1966	*Pezizomycotina*
	Hypochnicium aotearoae B.C. Paulus & al. 2007	*Agaricomycotina*
	Neotyphodium aotearoae C.D. Moon & al. 2002	*Pezizomycotina*
	Penicillium aotearoae Visagia & Seifert 2016	*Pezizomycotina*
aotearoana	*Pannaria aotearoana* Elvebakk & Elix 2016	*Pezizomycotina* [L]
araniiti	*Cortinarius araniiti* Soop 2014	*Agaricomycotina*
aroha	*Poria aroha* G. Cunn. 1947	*Agaricomycotina*
awakinoana	*Chlorociboria awakinoana* P.R. Johnst. 2005	*Pezizomycotina*
awhitu	*Fomes awhitu* G. Cunn. 1948	*Agaricomycotina*
corokiae	*Septoria corokiae* Henn.1898	*Pezizomycotina*
hakaroa	*Gymnopus hakaroa* J.A. Cooper & P. Leonard 2013	*Agaricomycotina*
harakeke	*Marthamyces harakeke* P.R. Johnst. 2019	*Pezizomycotina*
haumata	*Uredo haumata* G. Cunn. 1928	*Pucciniomycotina*
hautu	*Hysterangium hautu* G. Cunn. 1938	*Agaricomycotina*
hautuensis	*Protubera hautuensis* Castellano & Beever 1994	*Agaricomycotina*
hauturu	*Cordyceps hauturu* Dingley 1953	*Pezizomycotina*
	Nectria hauturu Dingley 1951	*Pezizomycotina*
	Phyllachora hauturu P.R. Johnst. & P.F. Cannon 2004	*Pezizomycotina*
hauturuanum	*Lophodermium hauturuanum* P.R. Johnst. 1989	*Pezizomycotina*

Epithet	Taxon	Classification
heketara	*Puccinia heketara* G. Cunn. 1924	*Pucciniomycotina*
hoheriae	*Eichleriella hoheriae* McNabb 1969	*Agaricomycotina*
	Irenopsis hoheriae Hansf. 1955	*Pezizomycotina*
	Myxosporium hoheriae J.D. Atk. 1940	*Pezizomycotina*
	Nectria hoheriae Dingley 1989	*Pezizomycotina*
	Puccinia hoheriae G. Cunn. 1923	*Pucciniomycotina*
	Puccinia hoheriae Wakef. 1917	*Pucciniomycotina*
horoeka	*Pirottaea horoeka* P.R. Johnst. 1998	*Pezizomycotina*
horopito	*Uredo horopito* G. Cunn. 1945	*Pucciniomycotina*
huia	*Solenia huia* G. Cunn. 1953	*Agaricomycotina*
huiaensis	*Bullera huiaensis* Hamam. & Nakase 1996	*Agaricomycotina*
hunua	*Hypocrea hunua* Dingley 1952	*Pezizomycotina*
	Poria hunua G. Cunn. 1947	*Agaricomycotina*
hupiro	*Aecidium hupiro* G. Cunn. 1924	*Pucciniomycotina*
iringa	*Cortinarius iringa* Soop 2003	*Agaricomycotina*
iti	*Rhodocybe iti* E. Horak 1979	*Agaricomycotina*
itiiti	*Microsporidium itiiti* L.A. Malone 1985	*Microsporidia*
kaikawakae	*Lophodermium kaikawakae* P.R. Johnst. 1989	*Pezizomycotina*
kaiku	*Caeomo kaiku* G. Cunn. 1930	*Pucciniomycotina*
kaimanawa	*Cortinarius kaimanawa* Soop 2003	*Agaricomycotina*
kaitokensis	*Strigula kaitokensis* Sérus. & Polly 1996	*Pezizomycotina* [L]
kamahi	*Fuscoporia kamahi* G. Cunn. 1965	*Agaricomycotina*
kamaka	*Clitopilus kamaka* J.A. Cooper 2014	*Agaricomycotina*
kanuka	*Hydnangium kanuka* J.A. Cooper 2014	*Agaricomycotina*
	Stephanospora kanuka T. Lebel & Castellano 2015	*Agaricomycotina*
kanukaneus	*Marasmius kanukaneus* G. Stev. 1964	*Agaricomycotina*
kapiti	*Anthostomella kapiti* Whitton & al. 2000	*Pezizomycotina*
	Stachybotrys kapiti Whitton & al. 2001	*Pezizomycotina*
kapitiae	*Anthostomella kapitiae* Whitton & al. 2000	*Pezizomycotina*
kapitiana	*Niesslia kapitiana* Whitton & al. 2012	*Pezizomycotina*
karaka	*Cercospora karaka* G.F. Laundon 1973	*Pezizomycotina*
karea	*Amanita karea* G.S. Ridl. 1991	*Agaricomycotina*
karetu	*Uredo karetu* G. Cunn. 1924	*Pucciniomycotina*
kauri	*Corticium kauri* G. Cunn. 1954	*Agaricomycotina*
keae	*Puccinia keae* G. Cunn. 1928	*Pucciniomycotina*
kiko	*Hymenoscyphus kiko* P.R. Johnst. 2013	*Pezizomycotina*
kiwiorum	*Austrosmittium kiwiorum* M.C. Williams & Lichtw. 1990	*Kickxellomycotina*
koherika	*Puccinia koherika* G. Cunn. 1930	*Pucciniomycotina*
kohu	*Lecanora kohu* Printzen & al. 2017	*Pezizomycotina* [L]
konini	*Uredo konini* G. Cunn. 1928	*Pucciniomycotina*
kopoti	*Puccinia kopoti* G. Cunn. 1923	*Pucciniomycotina*
kopuwaianus	*Tetramelas kopuwaianus* Elix & H. Mayrhofer 2018	*Pezizomycotina* [L]

EPITHET	TAXON	CLASSIFICATION
kowhai	*Aecidium kowhai* G. Cunn. 1924	*Pucciniomycotina*
	Clonostachys kowhai Schroers 2001	*Pezizomycotina*
	Nectria kowhai Dingley 1956	*Pezizomycotina*
kukutae	*Phaeosphaeria kukutae* G.S. Ridl. 1988	*Pezizomycotina*
mahinapua	*Pirottaea mahinapua* P.R. Johnst. 1998	*Pezizomycotina*
mahinapuense	*Sarcostroma mahinapuense* Gadgil & M.A. Dick 1999	*Pezizomycotina*
mahuianum	*Lophodermium mahuianum* P.R. Johnst. 1989	*Pezizomycotina*
maire	*Laricifomes maire* G. Cunn. 1965	*Agaricomycotina*
makarorae	*Psilocybe makarorae* P.R. Johnst. & P.K. Buchanan 1995	*Agaricomycotina*
mamaku	*Mycena mamaku* Segedin 1991	*Agaricomycotina*
manawaorae	*Ascochyta manawaorae* Verkley & al. 2010	*Pezizomycotina*
manawatua	*Anthostomella manawatua* Whitton & al. 2000	*Pezizomycotina*
mangatepopense	*Lophodermium mangatepopense* P.R. Johnst. 1989	*Pezizomycotina*
mania	*Puccinia mania* G. Cunn. 1930	*Pucciniomycotina*
manuka	*Hypocrea manuka* Dingley 1952	*Pezizomycotina*
	Nectria manuka Dingley 1951	*Pezizomycotina*
	Phyllachora manuka P.R. Johnst. & P.F. Cannon 2004	*Pezizomycotina*
	Poria manuka G. Cunn. 1947	*Agaricomycotina*
manukanea	*Astrosporina manukanea* E. Horak 1978	*Agaricomycotina*
marama	*Debaryomyces marama* di Menna 1954	*Saccharomycotina*
maruiaensis	*Lactarius maruiaensis* McNabb 1971	*Agaricomycotina*
maungahukae	*Lecidea lapicida* var. *maungahukae* Hertel 2001	*Pezizomycotina* [L]
maungatautari	*Ellisembia maungatautari* McKenzie 2010	*Pezizomycotina*
	Solicorynespora maungatautari McKenzie 2010	*Pezizomycotina*
maungatuensis	*Buellia maungatuensis* Elix & H. Mayrhofer 2017	*Pezizomycotina* [L]
maurea	*Puccinia maurea* G. Cunn. 1930	*Pucciniomycotina*
mumura	*Amanita mumura* G.S. Ridl. 1991	*Agaricomycotina*
murihikuana	*Umbilicaria murihikuana* D.J. Galloway & L.G. Sancho 2005	*Pezizomycotina* [L]
muritai	*Lepista muritai* G. Stev. 1964	*Agaricomycotina*
muritaiensis	*Hygrophorus muritaiensis* G. Stev. 1963	*Agaricomycotina*
namua	*Puccinia namua* G. Cunn. 1924	*Pucciniomycotina*
nehuta	*Amanita nehuta* G.S. Ridl. 1991	*Agaricomycotina*
ngohengohe	*Rhodotorula ngohengohe* Padamsee & al. 2017	*Pucciniomycotina*
nikau	*Epithele nikau* G. Cunn. 1956	*Agaricomycotina*
	Lachnella nikau G. Cunn. 1963	*Agaricomycotina*
	Peniophora nikau G. Cunn. 1963	*Agaricomycotina*
	Sebacina nikau McNabb 1969	*Agaricomycotina*
ohakune	*Hymenoscyphus ohakune* P.R. Johnst. 2013	*Pezizomycotina*
ohauensis	*Thaxterogaster ohauensis* Soop 1998	*Agaricomycotina*
okatina	*Anthostomella okatina* Whitton & al. 2000	*Pezizomycotina*
omahutaense	*Sporidesmium omahutaense* Matsush. 1985	*Pezizomycotina*
oratiensis	*Mycena oratiensis* Segedin 1991	*Agaricomycotina*

EPITHET	TAXON	CLASSIFICATION
orokonuiana	*Megalaria orokonuiana* Fryday & A. Knight 2012	*Pezizomycotina* [L]
otagensis/-ense	*Acarospora otagensis* H. Magn. 1943	*Pezizomycotina* [L]
	Aecidium otagense Linds. 1867	*Pucciniomycotina*
	Buellia otagensis Zahlbr. 1941	*Pezizomycotina* [L]
	Corticium otagense G. Cunn. 1963	*Agaricomycotina*
	Lecidea otagensis Nyl. 1867	*Pezizomycotina* [L]
	Marasmius otagensis G. Stev. 1964	*Agaricomycotina*
	Melanospora otagensis Linds. 1867	*Pezizomycotina* [L]
	Nectria otagensis Linds. 1867	*Pezizomycotina*
	Parmelia otagensis Zahlbr. 1941	*Pezizomycotina* [L]
	Pellicularia otagensis G. Cunn. 1953	*Agaricomycotina*
	Porina otagensis P.M. McCarthy 1999	*Pezizomycotina* [L]
	Sphaeria otagensis Linds. 1867	*Pezizomycotina*
	Verrucaria otagensis Zahlbr. 1941	*Pezizomycotina* [L]
otagoana	*Lecidea otagoana* Zahlbr. 1941	*Pezizomycotina* [L]
	Pertusaria otagoana D.J. Galloway 1983	*Pezizomycotina* [L]
otagoensis/-ense	*Coniocybe otagoensis* Js. Murray 1960	*Pezizomycotina*
	Leucopaxillus otagoensis G. Stev. 1964	*Agaricomycotina*
	Ramalina otagoensis W. Martin & J. Child 1972	*Pezizomycotina* [L]
otakou	*Poria otakou* G. Cunn. 1947	*Agaricomycotina*
	Uromyces otakou G. Cunn. 1923	*Pucciniomycotina*
otira	*Aecidium otira* G. Cunn. 1928	*Pucciniomycotina*
pahiensis	*Lecidea pahiensis* Zahlbr. 1941	*Pezizomycotina* [L]
papakaiensis	*Russula papakaiensis* McNabb 1973	*Agaricomycotina*
papakurae	*Circinotrichum papakurae* S. Hughes & Piroz. 1971	*Pezizomycotina*
papanui	*Buellia papanui* Elix & H. Mayrhofer 2017	*Pezizomycotina* [L]
	Caloplaca papanui D.J. Galloway 2004	*Pezizomycotina* [L]
paraoniti	*Cortinarius paraoniti* Soop 2013	*Agaricomycotina*
paraonui	*Cortinarius paraonui* Soop 2005	*Agaricomycotina*
pareparina	*Amanita pareparina* G.S. Ridl. 1991	*Agaricomycotina*
patearoana	*Buellia patearoana* Elix & A. Knight 2017	*Pezizomycotina* [L]
pekeoides	*Amanita pekeoides* G.S. Ridl. 1991	*Agaricomycotina*
pirongia	*Poria pirongia* G. Cunn. 1947	*Agaricomycotina*
poropingao	*Stephanospora poropingao* T. Lebel & Castellano	*Agaricomycotina*
pounamu	*Hispidula pounamu* P.R. Johnst. 2003	*Pezizomycotina*
	Puccinia pounamu G. Cunn. 1923	*Pucciniomycotina*
	Stephanospora pounamu T. Lebel & Castellano 2015	*Agaricomycotina*
poutoensis	*Chlorociboria poutoensis* P.R. Johnst. 2005	*Pezizomycotina*
puawhananga	*Uredo puawhananga* G.T.S. Baylis 1954	*Pucciniomycotina*
pumatona	*Amanita pumatona* G.S. Ridl. 1991	*Agaricomycotina*
rakiurae	*Parmeliella rakiurae* P.M. Jørg. & D.J. Galloway 2004	*Pezizomycotina* [L]
rangitatensis	*Amandinea rangitatensis* Elix & H. Mayrhofer 2017	*Pezizomycotina* [L]
rapua	*Microsporidium rapua* J.B. Jones 1981	*Microsporidia*
rata	*Poria rata* G. Cunn. 1947	*Agaricomycotina*

EPITHET	TAXON	CLASSIFICATION
rautahi	*Puccinia rautahi* G. Cunn. 1930	*Pucciniomycotina*
rekohu	*Phyllachora hauturu* subsp. *rekohu* P.R. Johnst. & P.F. Cannon 2004	*Pezizomycotina*
rimuphilus	*Marasmius rimuphilus* Desjardin & E. Horak 1997	*Agaricomycotina*
rimutaka	*Collybia rimutaka* G. Stev. 1964	*Agaricomycotina*
rongomai-pounamu	*Candida rongomai-pounamu* Padamsee & al. 2017	*Saccharomycotina*
rotoruaensis	*Chytriomyces rotoruaensis* Karling 1970	*Chytridiomycotina*
ruapehu	*Nectria ruapehu* Dingley 1951	*Pezizomycotina*
taiepa	*Amanita taiepa* G.S. Ridl. 1991	*Agaricomycotina*
takapauensis	*Nosema takapauensis* I.M. Hall & al. 1976	*Microsporidia*
takoropuku	*Elsinoe takoropuku* G.S. Ridl. & Ramsfield 2006	*Pezizomycotina*
tapawera	*Macowanites tapawera* T. Lebel 2002	*Agaricomycotina*
tararua	*Puccinia tararua* G. Cunn. 1923	*Pucciniomycotina*
tararuana	*Lecanora tararuana* Zahlbr. 1941	*Pezizomycotina* [L]
tararuensis	*Lecidea tararuensis* Zahlbr. 1941	*Pezizomycotina* [L]
taupoensis	*Sporobolomyces taupoensis* Hamam. & Nakase 1995	*Pucciniomycotina*
tawa	*Hypocrea tawa* Dingley 1952	*Pezizomycotina*
	Nectria tawa Dingley 1951	*Pezizomycotina*
	Sebacina tawa McNabb 1969	*Agaricomycotina*
	Trametes tawa G. Cunn. 1948	*Agaricomycotina*
	Tremella tawa McNabb 1990	*Agaricomycotina*
	Trichoderma tawa P. Chaverri & Samuels 2003	*Pezizomycotina*
tawai	*Lactarius tawai* McNabb 1971	*Agaricomycotina*
	Russula tawai McNabb 1973	*Agaricomycotina*
tawhai	*Fuscoporia tawhai* G. Cunn. 1948	*Agaricomycotina*
tekapo	*Puccinia tekapo* McNabb 1962	*Pucciniomycotina*
ti	*Colletotrichum ti* B.S. Weir & P.R. Johnst. 2012	*Pezizomycotina*
tiritea	*Puccinia tiritea* G. Cunn. 1923	*Pucciniomycotina*
toa	*Puccinia toa* G. Cunn. 1930	*Pucciniomycotina*
toatoa	*Tyromyces toatoa* G. Cunn. 1965	*Agaricomycotina*
toetoe	*Uredo toetoe* G. Cunn. 1924	*Pucciniomycotina*
tokerau	*Hispidula tokerau* P.R. Johnst. 2003	*Pezizomycotina*
tongariro	*Cyphella tongariro* G. Cunn. 1953	*Agaricomycotina*
toro	*Hypocrea toro* Dingley 1952	*Pezizomycotina*
totara	*Cyphella totara* G. Cunn. 1953	*Agaricomycotina*
	Peniophora totara G. Cunn. 1955	*Agaricomycotina*
	Poria totara G. Cunn. 1965	*Agaricomycotina*
totarae	*Auricula totarae* Lloyd 1920	*Agaricomycotina*
	Hysterium pulicare subsp. *totarae* Sacc. 1908	*Pezizomycotina*
	Lecanactis totarae Zahlbr. 1941	*Pezizomycotina* [L]
totaranuiensis	*Scutellinia totaranuiensis* J. Moravec 1996	*Pezizomycotina*
tuapekensis	*Buellia tuapekensis* Elix & A. Knight 2017	*Pezizomycotina* [L]

Epithet	Taxon	Classification
tuku	*Ramomarthamyces tuku* P.R. Johnst.	*Pezizomycotina*
tupare	*Uredo tupare* G. Cunn. 1924	*Pucciniomycotina*
umerensis	*Lactarius umerensis* McNabb 1971	*Agaricomycotina*
	Russula umerensis McNabb 1973	*Agaricomycotina*
ura	*Mycena ura* Segedin 1991	*Agaricomycotina*
urewera	*Zanclospora urewera* J.A. Cooper 2005	*Pezizomycotina*
waikaia	*Hymenoscyphus waikaia* P.R. Johnst. 2013	*Pezizomycotina*
waikanaensis	*Hygrophorus waikanaensis* G. Stev. 1963	*Agaricomycotina*
	Phaeosphaeria waikanaensis G.S. Ridl. 1988	*Pezizomycotina*
waikaremoana	*Entoloma waikaremoana* E. Horak 2008	*Agaricomycotina*
waiouru	*Cintractia waiouru* G. Cunn. 1945	*Ustilaginomycotina*
waiporianus	*Cortinarius waiporianus* Soop 2013	*Agaricomycotina*
waiporiensis	*Leucopaxillus waiporiensis* G. Stev. 1964	*Agaricomycotina*
	Parmelia waiporiensis Hillmann 1938	*Pezizomycotina* [L]
waipoua	*Uromyces waipoua* McNabb 1966	*Pucciniomycotina*
waitakere	*Stachybotrys waitakere* Whitton & al. 2001	*Pezizomycotina*
waitemataensis	*Niesslia waitemataensis* W. Gams & al. 2019	*Pezizomycotina*
wakatipu	*Anthracoidea wakatipu* Vánky 2000	*Ustilaginomycotina*
weraroa	*Psilocybe weraroa* Borov. & al.	*Agaricomycotina*
weraroensis	*Poria weraroensis* G. Cunn. 1947	*Agaricomycotina*
whakapapaensis	*Sphaerophorus whakapapaensis* Wedin 1991	*Pezizomycotina* [L]
whakatipae	*Lecidea whakatipae* C. Knight 1876	*Pezizomycotina* [Lc]
whakatipu	*Puccinia whakatipu* G. Cunn. 1924	*Pucciniomycotina*
wharanui	*Uredo wharanui* G. Cunn. 1924	*Pucciniomycotina*
wheroparaonea	*Limacella wheroparaonea* G.S. Ridl. 1993	*Agaricomycotina*

Discussion

Pre-Cunningham use of te reo Māori

The earliest te reo-derived fungal epithet was *otagensis*/*otagense*, used for five specimens (two lichens, two unlichenised ascomycetes, and a spectacular rust affecting puāwhānanga [*Clematis paniculata*] blossoms) collected by Scottish lichenologist William Lauder Lindsay during an extended visit to Otago Province, and later described by Lindsay (1867) and Nylander (1867). A lichenicolous fungus was described by New Zealand-resident lichenologist Charles Knight (1876) as *Lecidea whakatipae*; the epithet refers to Wakatipu, one of the Otago Lakes, probably the vicinity of the unlisted type locality. The only other 19th century te reo-derived epithet was a pathogen of a korokio tree [*Corokia buddleioides*] growing in Germany and described by German mycologist Paul Hennings (1899) as *Septoria* "*corockeae*" (correctly *corokiae*;

Turland & al. 2018: Art. F.9.1). In the early 20th century, three more te reo-derived epithets were published: *Hysterium pulicare* subsp. *totarae* on a tōtara tree [*Podocarpus totara*] growing in Italy (Saccardo 1908); *Puccinia hoheriae* on a specimen of hōhere [*Hoheria populnea*] sent to Kew, England for fungal identification (Wakefield 1917); and *Auricula totarae* on dead tōtara wood sent to USA for fungal identification (Lloyd 1920).

Use of te reo Māori by Cunningham and his successors

Cunningham began proposing te reo Māori epithets in his first paper on rust fungi in New Zealand (Cunningham 1923) and continued to do so until his two posthumously published monographs (Cunningham 1963, 1965). His example has inspired numerous subsequent New Zealand mycologists (and others working on New Zealand fungi) to use te reo Māori and ta re Moriori [the indigenous language of Rēkohu/Chatham Islands, New Zealand] as the basis of new fungal names. A total of 231 such fungal names: five genera (Table 1); and 226 species/subspecies/varieties (Table 2), have been located, and are listed either as published or with minor orthographic corrections required to comply with the International Code of Nomenclature for algae, fungi, and plants (ICN; Turland & al. 2020). Although Veale & al. (2019: Appendix S1) published a "List of taxa recorded with te reo / ta re epithets", this included only one fungal genus and 140 fungal species/subspecies (i.e., 90 names, including 14 of Cunningham's 56 species, were omitted); their list contained several misspellings and miscitations, as well as three entries that have no connection with te reo Māori (*ackamae* refers to the host genus *Ackama*, which is an anagram; *horakii* honours Austrian mycologist Egon Horak, who has been collecting and describing New Zealand agarics for more than 50 years; and *Waitea* refers to the Waite Research Institute, Adelaide, Australia).

Nomenclatural use of te reo Māori and other non-latinate languages

The majority of the published te reo Māori epithets have been treated as undeclinable adjectives or nouns in apposition, preserving the authentic te reo Māori orthography (apart from the problem of "long" vowels indicated by macron diacritical marks; see next section, below). The presentation of vernacular epithets as nouns in apposition has a tradition dating from the birth of botanical nomenclature: Linnaeus (1753) published numerous examples, e.g., *Calamus rotang* L., rattan; *Piper betle* L., betel nut; *Theobroma cacao* L., cacao [cocoa]. Other te reo Māori epithets have been modified in what appear to be misguided attempts to convert them into "Latin" adjectives or genitive nouns. Like the majority of non-European vernacular languages, te reo Māori does not conform to the latinate word-model of a linguistic stem + a declinable inflection that indicates grammatical case, gender, number, etc. Attempts to modify vernacular words according to latinate grammatical conventions result in the creation of chimaeras that convey no Latin meaning and mangle the vernacular word. Every syllable in te reo Māori words consists of a vowel (with or without a preceding consonant); removal of the final vowel from a word does not create a "linguistic stem", but rather it deletes either the whole of the final syllable or leaves a final consonant deprived of its vowel, distorting the pronunciation and meaning of the word and diminishing its mana [status; prestige; spirituality].

Nomenclatural use of te reo Māori macron-vowels

In modern orthography, te reo Māori vowels are differentiated as short ["a/e/i/o/u"] or long [either "aa/ee/ii/oo/uu", or "ā/ē/ī/ō/ū"]. ICN Art. 60.7 (Turland & al. 2020) requires the suppression of all diacritical letters; therefore the macron-vowel orthography is not permitted, but the double-vowel orthography would be acceptable as "necessary transcriptions" of the macron-vowels. Veale & al. (2019) reached the same conclusion, in spite of having misinterpreted and mistranscribed Art. 60.7. It is diacritical signs (including macrons) that are forbidden, because the diacritical letters are additions to the basic Latin alphabet; the diaeresis, two dots placed over the second of two adjacent vowels, is permitted as an **optional** phonetic device to indicate the separate pronunciation of the two vowels. (Confusion often arises because the typographies of the diacritical umlaut and the non-diacritical diaeresis are identical.)

Place name epithets in te reo Māori and other non-latinate languages

There is no reason why epithets derived from vernacular place names cannot also be presented as nouns in apposition; as discussed above, they should not be presented as "Latin" genitive nouns. However, place names in all languages are routinely formed into adjectival epithets by adding one of the geographical Latin suffixes recommended by ICN Rec. 60D.1 (Turland & al. 2020). For vernacular place names, this is an acceptable alternative to the preferred noun in apposition epithets, provided the place names are not abridged to create spurious "linguistic stems"; for te reo Māori place names, this means that the final vowel should always be retained before the geographical suffix is added, e.g., *awakinoana* from Awakino; *huiaensis* from Huia; and *weraroaensis* from Weraroa.

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